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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

CHIN, RANDALL E

ART UNIT PAPER NUMBER

1744

DATE MAILED: 02/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/070,094

Applicant(s)

STOTT ET AL.

Examiner

Randall Chin

Art Unit

1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 03292002
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

1. The drawings are objected to because there are two (2) occurrences of "Figure 6". The second occurrence should read --Fig. 7--. Also, in Fig. 4 should the darkened circle shown in the bottom elevation of the drive unit adapter being of hexagonal shape to show adaptation to alternative, hexagonal drive arbors (see last paragraph of p. 2 of the specification). Clarity is respectfully requested here.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

3. The disclosure is objected to because of the following informalities:

On p. 3 of the specification, under the "Brief Description of the Drawings" section, it is suggested to delete the page number references (i.e., to pages 6, 7 and 8). The same concern holds for the references to pages in other parts of the specification. The labels "Figure 1", "Figure 2", etc. should each read Fig. 1, Fig. 2, etc. for consistency with the labels used in the drawings.

Art Unit: 1744

On p. 3, under the brief description for Fig. 7, it is unclear what "suggested accessories attachments" are referring to. This is vague. Also, the term "affix" is misspelled.

On p. 4, under the section "Spacings to shorten drive units", it is unclear why the term "arbor" is underlined here.

On p. 5, it is unclear what "6 lug" is referring to (two occurrences of this phrase). Also, there should be consistent spelling for the terms "Adapter" and "Adaptor." Inconsistent spellings for these terms occurs throughout the application.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are replete with indefinite language and Applicant's cooperation is respectfully requested in reviewing and clarifying all the claims. Further, claim 4 sets forth alternative expressions, e.g., "and/or" and "or", rendering the claims indefinite since it is unclear what Applicant intends the claimed invention to be. Part e) of claim 4 also makes the claim vague. Additionally, claims 1, 3 and 7 include language not typical of U.S. claim practice, e.g., use of the terms "general inventive concept," "invention," "reference to the accompanying drawings," etc.

Art Unit: 1744

Claim 1, line 3, the recitation "of most brushcutters, whipper snipper and other such devices" renders the claim indefinite since it is unclear whether these are merely exemplary or actual limitations in the claim. Claim 1, line 6, "the base of the cleaning conversion unit" lacks proper antecedent basis.

Claim 3, line 4, "the various cleaning attachments" lack proper antecedent basis. The recitation in parenthesis referring to "approximately 20 millimeters" should be clarified if this is a positive limitation. The recitations "the threaded drive arbor" and "the locating lock-nut" each lack antecedent basis. Also, on line 4, it would appear that the "base" is referring to the "drive unit base" and clarification is respectfully requested here.

Claim 5, "the driving spindle or arbor of the brushcutter or whipper snipper" is an alternative expression rendering the claims indefinite since it is unclear what Applicant intends the claimed invention to be. Also, "the castellated teeth" and "the notches" lack antecedent basis.

Claim 6, "the male drive shaft" and "the female drive socket" lack antecedent basis.

Claims 8, 9, 10 and 11, the recitation "on one spherical surface" is unclear and has never been positively recited. Furthermore, such term appears to constitute new matter.

Claim 12, "the multi-purpose maintenance attachments" and "the hook and loop surface of the drive unit base" lack antecedent basis. It would appear that the drive unit base would only have one of a hook and loop surface.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 6 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Nagano '785.

The patent to Nagano '785 teaches with respect to claim 1 an attachment conversion unit that could be adapted (involves intended use) to be attached to the drive shaft of most brushcutters, whipper snippers and other such devices, the attachment conversion unit comprising a mounting hub 15 (Figs. 1 and 2) serving as a drive unit adaptor, a flat annular base 18 serving as a drive unit base, and at least one rotary cleaning utensil attachment 21 (Fig. 1) attached to the base of the cleaning conversion unit (Fig. 2).

As well as claim 6 is understood, Nagano's drive unit base is attached to the drive unit adaptor by inserting the male "drive" shaft of the drive unit adaptor 15 (Fig. 2) into the female "drive" socket (back or top end of drive unit base 18 as shown in Fig. 2) of the drive unit base 18.

As well as claim 12 is understood, the multi-purpose maintenance attachment 21 is attached to the drive unit base by pressing the attachment onto the hook and loop surface 14 (Fig. 1) of the drive unit base.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3, 4 and 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagano '785 in view of Hoff '719.

The patent to Nagano '785 teaches all of the recited subject matter as previously recited with the exception of a recessed fixing surface through which the threaded drive arbor protrudes and to which the locating lock-nut is affixed securing the invention to a rotating device. Hoff '719 discloses a recessed fixing surface (see lines in phantom in Fig. 8) through which a threaded drive arbor 120 protrudes and to which a locating lock-nut (see phantom lines in Fig. 8) is affixed securing the attachment to a rotating device. It would have been obvious to one of ordinary skill in the art to have modified Nagano's attachment drive arrangement such that there is a recessed fixing surface through which a threaded drive arbor protrudes and to which the locating lock-nut is affixed securing the attachment to a rotating device as suggested by Hoff '719 in order to more adequately secure the locating lock-nut.

Note, Nagano '785 already teaches the drive unit base 18 being comprised of an enlarged round head (Fig. 1) with a flat base to which a hook and loop product 14 is attached for the purpose of fixing the various cleaning attachments (see col. 4, lines 38-43). Nagano's base has a top elevation comprising a circular stepped drive socket at 15

Art Unit: 1744

(Figs. 1 and 2) which has a non-circular drive centrally located at the top of the base unit. Whether the drive shape is square or hexagonal merely involves a change in shape which is obvious in order to provide for a non-circular drive to prevent slippage. What is important here is that the drive is non-circular and a square or hexagonal drive shape would accomplish the same function.

As for the base being approximately 58 millimeters tall and the recessed fixing surface being approximately 20 millimeters, such parameters merely relate to size and changes in size are deemed to be within the level of ordinary skill and can depend merely on the type of finishing or cleaning operation involved.

As for claim 4, Nagano's disk 21 is an abrasive scourer of circular form having a diameter of "approximately" 125 millimeters (since it can be 100 mm as recited in col. 3, lines 39-40) and a thickness up to 50 millimeters (since it can be 5-10 mm as recited in col. 3, lines 40-41). As for the disk being a standard plastic and/or nylon which is pre-manufactured by way of interlocking thread, such materials are well known to those skilled in the art and obvious to utilize in order to facilitate mass production. Also, methods of making are not germane to patentability in apparatus claims. As for range of grades of coarseness, the claim does not positively recite such limitation and merely reflects a capability to do so. In any case, Nagano's disk is an abrasive scourer providing a coarseness and one skilled in the art would find it obvious to provide for a range depending on the sanding or grinding operation at hand.

As for claims 8, 9, 10 and 11, to enable the proper attachment of the disk to the hook or loop 14 surface of the drive unit base, Nagano's disk 21 provides on one

Art Unit: 1744

spherical surface, a compatible material 22 which enables fixation to the hook or loop mechanism.

9. Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagano '785 in view of Plazanet '554.

The patent to Nagano '785 teaches all of the recited subject matter as previously recited with the exception of the drive unit adapter comprising a circular plate with six castellated teeth and wherein the drive unit adapter has a fixed central square drive shaft with a centered locating hole. The patent to Plazanet '554 teaches a clamp or drive unit adapter comprising a circular plate 7 with castellated teeth (Fig. 2). It would have been obvious to one of ordinary skill to have modified Nagano's adapter such that it is in the form of a circular plate with castellated teeth as suggested by Plazanet '554 to securely lock/fit the adapter to drive shaft. As for providing six teeth, Plazanet teaches three teeth, however, the number of teeth is deemed obvious and merely depends on the degree of securement desired between adapter and drive shaft.

As for claim 5, the modified Nagano device would allow for a turning and locking feature for the castellated teeth.

10. Any inquiry concerning this communication or earlier communication from the Examiner should be directed to Randall Chin whose telephone number is (571) 272-1270. The Examiner can normally be reached on Monday through Thursday and every other Friday.

Art Unit: 1744

If attempts to reach the Examiner are unsuccessful, the Examiner's supervisor, Robert Warden, can be reached at (571) 272-1281. The number for Technology Center 1700 is (571) 272-1700.

The central fax number for the organization where this application or proceeding is assigned is (703) 872-9306.



R. Chin



Randall Chin
Primary Examiner
Art Unit 1744